

## 1. TRS Providers' Access to SS7 Technology

17. Cellular Telecommunications Industry Association (CTIA) contends that TRS providers may not have access to SS7 technology. CTIA asserts that Congress distinguished the terms "common carrier" and "telecommunications relay services," and that these categories are mutually exclusive. CTIA asserts that if SS7 technology is available only to common carriers, it is not available to TRS providers and TRS facilities.<sup>65</sup> It appears that CTIA made this argument, in part, in reliance on statements made in the *Improved TRS FNPRM*, which we now recognize were a misstatement of our rules. Our statement that SS7 technology is restricted for common carriers' use only<sup>66</sup> is not correct and misinterprets the definition of SS7 technology in our rules. The phrase "carrier to carrier" merely explains the functional aspect of SS7 technology relative to that section of our rules;<sup>67</sup> it does not define this technology as a service that is totally owned and/or controlled only by common carriers.<sup>68</sup> Therefore, we find that our definition of SS7 technology does not support the conclusion that use of SS7 technology is restricted to common carriers. In fact, a number of non-common carriers, including Illuminet and Telecommunication Services, Inc. (ITS), use and provide SS7 technology to common carriers and others.<sup>69</sup>

18. CTIA also asserts that allowing non-network providers (such as TRS facilities) access to information transmitted via SS7 could create risks to network integrity and the security of the SS7 data, particularly data associated with fraud detection technologies.<sup>70</sup> We do not find these objections persuasive. We recognize the sensitive nature of handling confidential CPN data. Our Caller ID rules set forth the confidentiality requirements required of common carriers handling CPN information.<sup>71</sup> Also, as TDI notes, TRS CAs are required to keep all caller information confidential.<sup>72</sup> TRS providers have a long history of observing confidentiality of information that passes through their systems. In any event, in order to adequately address concerns about confidentiality, we will require TRS providers, whether they are common carriers or not, that use SS7 technology to abide by our Caller ID/blocking rules.<sup>73</sup> We find that our

---

<sup>65</sup> CTIA Comments at 3-4.

<sup>66</sup> *Improved TRS FNPRM* at ¶ 127.

<sup>67</sup> See 47 C.F.R. § 64.1600.

<sup>68</sup> In any event, see 47 U.S.C. § 225, requiring common carriers to provide TRS. Indeed, the whole purpose of section 225 is to require common carriers offering telephone voice transmission services to provide TRS. See also U.S.C. § 225(d)(1)(E) (prohibiting TRS providers from "failing to fulfill the obligations of common carriers by refusing calls").

<sup>69</sup> See, e.g., <http://kansascity.bizjournals.com/kansascity/stories/2001/08/27/story2.html>; [http://www.tsiconnections.com/print\\_email/print/display.cfm?ID=71&MarketID=2](http://www.tsiconnections.com/print_email/print/display.cfm?ID=71&MarketID=2).

<sup>70</sup> CTIA Comments at 6.

<sup>71</sup> 47 C.F.R. § 64.1600 *et seq.*

<sup>72</sup> See TDI Comments at 8 (noting that CAs are bound to high standards of code of ethics and confidentiality as delineated in our previous TRS rulemaking proceedings). See 47 C.F.R. § 64.604(a)(2) (*Confidentiality and Conversation Content (i)*).

<sup>73</sup> 47 C.F.R. § 64.1600 *et seq.* A majority of states have enacted state-specific legislation concerning the Caller ID privacy issues as well.

Caller ID rules as well as the TRS confidentiality rules<sup>74</sup> adequately address CTIA's concerns.

19. Finally, CTIA asserts that nothing in the legislative history of Title IV of ADA indicates that Congress intended to define TRS as a common carrier service or impose common carrier obligations on TRS facilities.<sup>75</sup> Sprint similarly contends that there is no statutory provision that allows non-common carriers access to SS7 technology.<sup>76</sup> WorldCom counters, however, that there is nothing in the statute that precludes the Commission from granting TRS providers access to SS7 technology.<sup>77</sup> Because we have concluded that the Commission misinterpreted our rule in stating, in the *Improved TRS FNPRM*, that only common carriers can have access to SS7 technology, and that that misinterpretation created this issue, we need not address these arguments.

20. *Benefits of SS7 Technology.* As we have noted, SS7 or similar technology facilitates the provision of Caller ID and call blocking, facilitates the transfer of caller information to a PSAP in the event of an emergency, and reduces the need to manually collect certain caller data and information used for caller profiles.<sup>78</sup> For these reasons, we conclude that TRS providers should have access to SS7 or similar technologies.

21. First, the Commission has found that the availability of Caller ID information promotes technological innovation.<sup>79</sup> For this reason, it is an important service that should be available to all. At the same time, we have recognized that the calling public has an interest in exercising a measure of control over the dissemination of their telephone numbers, and that this privacy interest must be reflected in our policies governing provision of Caller ID service.<sup>80</sup> Accordingly, the Commission's Caller ID rules require that "[c]arriers must arrange their CPN-based services, and billing practices, in such a manner that when a caller requests that the CPN not be passed, a carrier may not reveal that caller's number or name, nor may the carrier use the number or name to allow the called party to contact the calling party."<sup>81</sup> Since SS7 or similar technology allow for the transmission of the information necessary for Caller ID, and also for call blocking, we conclude that TRS providers should have access to this technology. In addition, it is important that caller information can be seamlessly transferred to a PSAP in the

---

<sup>74</sup> 47 C.F.R. § 64.604(a)(2)(i), providing, in part, that "[e]xcept as authorized by Section 705 of the Communications Act, 47 U.S.C. 605, CAs are prohibited from disclosing the content of any relayed conversation regardless of content, and with a limited exception for STS CAs, from keeping records of the content of any conversation beyond the duration of a call, even if to do so would be inconsistent with state or local law." An exception to this prohibition is at 47 C.F.R. § 64.604(a)(2), requiring that "[a] CA must pass along the caller's telephone number to the PSAP when a caller disconnects before being connected to emergency services."

<sup>75</sup> CTIA Comments at 4.

<sup>76</sup> Sprint Comments at 3.

<sup>77</sup> WorldCom Comments at 2-3.

<sup>78</sup> *Improved TRS FNPRM* at ¶¶ 127-128.

<sup>79</sup> *1994 Caller ID Order* at ¶ 8.

<sup>80</sup> *1994 Caller ID Order* at ¶ 34.

<sup>81</sup> 47 C.F.R. § 64.1601(b).

event of an emergency during a TRS call,<sup>82</sup> and SS7 or similar technology will facilitate this transfer. In this regard, we also note that section 225 encourages TRS providers and the Commission to be innovative in improving TRS consistently with the functional equivalency mandate.<sup>83</sup> Finally, some commenters<sup>84</sup> agree with the Commission's tentative conclusion in the *Improved TRS FNPRM*<sup>85</sup> that allowing TRS providers access to SS7 (and other technologies) may obviate or reduce the TRS providers' need to manually collect some of the CPN information<sup>86</sup> that is necessary information to meet certain of the TRS mandatory minimum standards.<sup>87</sup>

22. *TRS Providers and Facilities May Use Best Technologies and Processes.* The California PUC asserts that TRS providers should have their choice of technology, including SS7 technology, and should not be required to utilize any one technology (including SS7) to comply with the mandatory minimum standards.<sup>88</sup> Other commenters similarly assert that it is not necessary to specify a particular technology that TRS providers must use to offer the improved services and features we require. For example, Bell Atlantic and Sprint suggest that Feature Group D<sup>89</sup> trunking and integrated service digital network (ISDN)<sup>90</sup> together provide an alternative to SS7 technology that obviates the need for TRS access to SS7 technology.<sup>91</sup> Sprint also explains that their TRS facilities use the Feature Group D trunks and ISDN to provide Caller ID functionality in several states.<sup>92</sup> It is not the Commission's practice to require specific technologies, but instead to require that TRS facilities and carriers provide certain services<sup>93</sup> and meet the mandatory minimum standards.<sup>94</sup> TRS providers therefore have the discretion to use any preferred technology that allows them to provide TRS and the services and features required

<sup>82</sup> See, e.g., AT&T Comments at 9; California PUC Comments at 4; NAD/TAN/CAN Comments at 14-17; SHHH Comments at 5-6; TDI Comments at 7.

<sup>83</sup> 47 U.S.C. § 225(a)(3).

<sup>84</sup> See, e.g., California PUC Comments at 4; TDI Comments at 8-9.

<sup>85</sup> *Improved TRS FNPRM* at ¶ 128.

<sup>86</sup> See, e.g., TDI Comments at 8-9 (automatically transferring information would be much faster than manually typing the same information into a database).

<sup>87</sup> See n.64, *supra*.

<sup>88</sup> See, e.g., California PUC Comments at 4.

<sup>89</sup> Feature Group D is a switching arrangement available from a local exchange carrier (LEC) end central office to interexchange (IXC or long distance) carriers. See Newton, Newton's Telecom Dictionary 292 (14<sup>th</sup> ed., Flatiron Publishing) (1998) (*Newton's Telecom Dictionary*).

<sup>90</sup> Integrated Services Digital Network (ISDN) is a unified end-to-end digital network, in which data originating from all types of communication (e.g., voice, text, data, still and moving pictures) are transmitted from one port (terminal) in the exchange (switch) over one access line to and from the subscriber. 15 C.F.R. Pt. 774, Supp. 1.

<sup>91</sup> See, e.g., Bell Atlantic Comments at 2; Sprint Comments at 5.

<sup>92</sup> See, e.g., Sprint Caller ID *ex parte* (August 2001); Technologies/Features *ex parte* meetings with Sprint, AT&T, WorldCom and Gallaudet's TAN (Sept & Oct 2001).

<sup>93</sup> See, e.g., *Federal State Joint Board on Universal Service*, 12 FCC Rcd 8776 (1997) at ¶ 49.

<sup>94</sup> See 47 C.F.R. § 64.604(a)-(c).

by the mandatory minimum standards.<sup>95</sup> Because of our actions taken in this *Report and Order*, however, TRS providers are required to observe the Commission's rules pertaining to Caller ID and call blocking services.<sup>96</sup>

## 2. Transmittal of Calling Party Information

23. In the *Improved TRS FNPRM*, the Commission tentatively concluded that access to SS7 would resolve problems identified between TRS and Caller ID service.<sup>97</sup> Such problems include that for TRS calls, when the called party is a Caller ID subscriber, the displayed caller identification information is sometimes the number of the TRS facility or the number of the calling party, but more often is blocked or unavailable.<sup>98</sup> TRS consumers report that when the called party does not recognize the incoming telephone number, or no number is displayed, the called party often declines to answer the call.<sup>99</sup> The Commission reasoned that if the called party knew the identity of the calling party, or knew that the call was from a TRS facility, he or she may be more likely to answer the call.<sup>100</sup> The Commission asked whether a signal could be devised that would indicate that an incoming call is either from a TRS user or from the TRS facility, and the Commission tentatively concluded that delivery of either the TRS facility's number or a standard TRS number, such as 711, for Caller ID on incoming TRS calls is technologically feasible.<sup>101</sup>

24. Based on the record in this proceeding,<sup>102</sup> we find that it is technologically possible for the TRS facility to transmit at least one of the following alternate identifying

<sup>95</sup> See, e.g., Sprint Comments at 6 (other technologies are being developed that permit Caller ID services through the relay center without the need for relay providers to spend millions of dollars to modify the system to use SS7).

<sup>96</sup> See 47 C.F.R. § 64.1600 *et seq.*

<sup>97</sup> *Improved TRS FNPRM* at ¶ 129, referencing NAD Comments to 1998 TRS Notice of Proposed Rulemaking at 26-27; TDI Comments to 1998 TRS Notice of Proposed Rulemaking at 21-22.

<sup>98</sup> See *Improved TRS FNPRM* at ¶ 129; see also, e.g., AT&T Comments at 10-11; NAD/TAN/CAN Comments at 20; TDI Comments at 9.

<sup>99</sup> See, e.g., NAD Comments to 1998 TRS Notice of Proposed Rulemaking at 26-27; TDI Comments to 1998 TRS Notice of Proposed Rulemaking at 21-22; see also NAD/TAN/CAN Comments at 20.

<sup>100</sup> *Improved TRS FNPRM* at ¶ 129.

<sup>101</sup> *Improved TRS FNPRM* at ¶ 130. See also, TDI Comments at 9 (concur with the Commission's tentative conclusion that the Caller ID device of a customer who receives a TRS call should display either the TRS facility's telephone number or a standard TRS number, such as 711).

<sup>102</sup> See, e.g., AT&T Comments at 5-6 (a 10-digit TRS facility number, but it does not fully replicate the Caller ID functions available); GTE Comments at 7 (TRS's 10-digit number); WorldCom Comments at 3-4 (it is technologically feasible and may resolve the Caller ID problems with not answering the call because of misreading the Caller ID information as a telemarketing call); SBC Comments at 5 (TRS facility's 10-digit number and recommends sending a text message on the Caller ID screen that reads, *i.e.*, "KANSAS RELAY CENTER") TDI Comments at 9 (supports tentative conclusion. . . . that the Caller ID [device] of a customer who receives a TRS call should display either the TRS facility's telephone number or a standard TRS number, such as 711).

telephone numbers.<sup>103</sup> 711; the TRS facility's telephone number; or the 10-digit telephone number of the originating caller. There has been some discussion of the benefits of a Caller ID subscriber being able to identify both that a call is from a certain party and that the call is coming via TRS. The record reflects that currently neither SS7 technology, nor other technology such as the Feature Group D trunking system, is capable of providing information other than one number as Caller ID, be it 711 or the standard 10-digit telephone number.<sup>104</sup> We note that currently some TRS facilities do provide the calling party's telephone number, and some states require Caller ID functionality in their contracts with TRS providers.<sup>105</sup> AT&T reports that AT&T TRS facilities pass a surrogate number (800-555-0000) to TRS customers to identify AT&T Relay on Caller ID devices.<sup>106</sup> WorldCom, however, suggests that the use of a surrogate number is not a desired alternative to providing the identity of the calling party and should be rejected.<sup>107</sup> NAD/CAN/TAN concurs with our tentative conclusion that delivery of either the TRS facility's telephone number or a standard TRS number, such as 711, for Caller ID on incoming calls is technologically feasible, should be required of all TRS providers, and that some solution is necessary to prevent TRS calls from being rejected when a calling or called party utilizes reveal and anonymous call rejection.<sup>108</sup>

25. Based on the record in this proceeding, we adopt our tentative conclusion that delivery of either the TRS facility's number or a standard TRS access number, such as 711, for Caller ID on incoming TRS calls is technologically feasible. We therefore conclude that when a TRS facility is able to transmit any identifying information, the TRS facility must pass through, to the called party, the number of the TRS facility, 711, or, if possible, the 10-digit number of the calling party.<sup>109</sup> The record also demonstrates a recognized benefit to TRS users when the calling party's number is made available to Caller ID subscribers.<sup>110</sup> We will allow the TRS provider to determine what identifying information is passed through the TRS facility so that a called party subscribing to Caller ID will, at a minimum, be able to identify the incoming call as being from a TRS facility or the calling party.

<sup>103</sup> *Id.* Currently, some TRS providers pass through the Caller ID information, *see, e.g.*, AT&T Comments at 5-6; WorldCom *ex parte* meeting October 1, 2001; Sprint *ex parte* meeting October 5, 2001.

<sup>104</sup> It is not technologically feasible, however, to pass on *both* the originating caller's number and an indicator that the call is through a TRS facility. WorldCom *ex parte* meeting on October 1, 2001; Sprint *ex parte* meeting on October 5, 2001.

<sup>105</sup> Maryland Relay now requires the Caller ID functionality. *See* [www.mdrelay.org](http://www.mdrelay.org). Caller ID is now available through Hamilton Relay. *See* [www.hamilton.net/relay/callerid.html](http://www.hamilton.net/relay/callerid.html).

<sup>106</sup> AT&T Comments at 5-6.

<sup>107</sup> WorldCom Comments at 3-4. WorldCom asserts that just knowing that a call was placed from a TRS facility does nothing to help the called party distinguish calls from a TRS facility that they desire to receive from those that they do not, explaining that this would not be a solution to provide functional equivalency.

<sup>108</sup> NAD/TAN/CAN Comments at 20-22.

<sup>109</sup> We note that our Caller ID rules will be applicable to TRS providers only to the extent that the TRS facilities operated by that TRS provider utilizes SS7 technology. *See* 47 C.F.R. § 64.1600 *et seq.*

<sup>110</sup> *See, e.g.*, AT&T Comments at 5-6; WorldCom Comments at 3-4; NAD/TAN/CAN Comments at 20-22.

## B. Operational Standards

### 1. Types of Calls

26. Consistent with the mandatory minimum standard obligations of common carriers,<sup>111</sup> TRS facilities must be capable of handling any type of call normally provided by telecommunications carriers unless the Commission determines that it is not technologically feasible to do so. TRS providers have the burden of proving the infeasibility of handling any particular type of call.<sup>112</sup> Presently, our TRS regulations require several forms of TRS, *e.g.*, traditional text-based TRS,<sup>113</sup> STS, and interstate Spanish relay services.<sup>114</sup> Further, we have required several types of traditional text-based TRS to support the preferences of users who want to use their own hearing or voice, *e.g.*, HCO<sup>115</sup> and VCO.<sup>116</sup> As technology has further developed, new variations of traditional TRS are now available to support the preferences and needs of persons with hearing and speech disabilities, *e.g.*, two-line VCO, two-line HCO, HCO-to-TTY, VCO-to-TTY, VCO-to-VCO, and HCO-to-HCO.<sup>117</sup>

27. In the *Improved TRS Order*, we tentatively concluded that these various new types of HCO and VCO calls were capable of being provided to TRS users in order for TRS to remain functionally equivalent.<sup>118</sup> As discussed below, we find that these additional types of TRS calls are being provided by TRS providers, are technologically feasible, and are desired by TRS users. We therefore adopt rules to require that these types of TRS calls be provided on an interstate and intrastate basis within six months of publication of this *Order* in the *Federal Register*. Requiring TRS providers to provide these additional types of TRS calls is consistent with our mandate to seek to make available to persons with disabilities new telecommunications technologies.<sup>119</sup>

#### a. Two-line VCO and Two-line HCO

28. Background. In the *Improved TRS FNPRM*, we sought comment on whether we should require two-line VCO and two-line HCO.<sup>120</sup> Two-line VCO, which is typically used by

<sup>111</sup> 47 C.F.R. § 64.604(a)(3).

<sup>112</sup> See 47 C.F.R. § 64.604(a)(3), as amended by the *Fifth Coin Sent-Paid Report and Order*, FCC 02-269, 17 FCC Rcd 21,233 (Oct. 2002).

<sup>113</sup> The text leg in a text-to-voice or voice-to-text call may be provided via TTY or by using IP Relay through the TRS user's computer or other web-enabled device. See, *e.g.*, *IP Relay Declaratory Ruling* at ¶ 1.

<sup>114</sup> See 47 C.F.R. § 64.603.

<sup>115</sup> See 47 C.F.R. §§ 64.601(7), 64.604(b)(5).

<sup>116</sup> See 47 C.F.R. §§ 64.601(10), 64.604(b)(5).

<sup>117</sup> Commenters were unable to elaborate on how some other types of TRS calls about which we sought comment, such as reverse VCO and reverse HCO, may be provided. We are, therefore, discontinuing our inquiry into these types of calls.

<sup>118</sup> *Improved TRS Order* at ¶ 138.

<sup>119</sup> See, *e.g.*, 47 U.S.C. § 225(b)(1), (d)(2); 47 C.F.R. § 64.604(b)(5).

<sup>120</sup> *Improved TRS FNPRM* at ¶ 138.

persons who are hard of hearing or late-deafened but have clear speech abilities, enables the person with a disability to speak directly to the other party on one line, without the assistance of a CA, and read what the other party is saying via a second line connected to the two-line VCO user's TTY. The CA hears and types the other party's words for the two-line VCO user to read. TRS users report that two-line VCO calls are more natural and efficient because the conversation moves more quickly than a one-line VCO call and allows for interruptions.<sup>121</sup> Two-line HCO, most commonly used by persons who are able to hear but have impaired speech,<sup>122</sup> works similarly to two-line VCO, except that one line is being used for hearing (the CA does not type the words of the other party) and the other line is used by the two-line HCO user to transmit text on the TTY, which is then read to the other party by the CA.<sup>123</sup>

29. Discussion. The record demonstrates that many TRS providers are currently offering two-line VCO and two-line HCO, demonstrating that it is technologically feasible to do so, and that these types of calls are desired by TRS users.<sup>124</sup> The record also does not contain any comments against requiring these types of calls. As a result, and because the record reflects that these types of calls offer distinct benefits to TRS users, we adopt rules to require that these types of TRS calls be provided on an interstate and intrastate basis.

30. We recognize that additional set-up time may be necessary for two-line VCO and two-line HCO calls compared to the set-up time required for a traditional TTY-to-voice call. However, we believe that a reasonable amount of time to set up a two-line VCO or a two-line HCO is acceptable given the benefit to the TRS user.<sup>125</sup> We decline at this time to define what a reasonable set-up time is for these types of calls. The Commission has not received sufficient comment on what might be a reasonable set-up time for two-line VCO and two-line HCO. We will include this matter in the attached *NPRM*, where we will seek comment on set-up times for

<sup>121</sup> See, e.g., NAD/TAN/CAN Comments at 29; SHHH Comments at 4. Two-line VCO performs similarly to one-line VCO. However, because one-line VCO is performed on one line, there is no interrupt capability and each party to the call must take turns speaking.

<sup>122</sup> Depending on the consumer, his or her disability, and personal preferences, STS relay may be an option for two-line HCO users because individuals with speech disabilities may also have mobility disabilities that can impair the ability to type on a TTY.

<sup>123</sup> Two-line HCO performs similarly to one-line HCO. However, because one-line HCO is performed on one line, there is no interrupt capability. We note that to make both two-line HCO and two-line VCO calls through traditional TRS the TRS user must have a three-way conference calling feature on at least one of his or her two lines. A three-way conference-calling feature is not required to make a two-line VCO or two-line HCO call through IP Relay if the TRS user has an available telephone line not used for the computer modem.

<sup>124</sup> See, e.g., NAD-TAN Comments at 29; WorldCom Comments at 18-19; see also [www.hamilton.net/relay/VCO.html](http://www.hamilton.net/relay/VCO.html); [www.deafhh.org/relay.pdf](http://www.deafhh.org/relay.pdf); [www.sprintbiz.com/government/sprint.relay/features](http://www.sprintbiz.com/government/sprint.relay/features).

<sup>125</sup> See, e.g., NAD/TAN/CAN Comments at 28-29. NAD/TAN/CAN notes that its members who have utilized two-line VCO strongly endorse its capability; however, they note that the quality of the experience as a "real-time" conversation is highly dependent on the quality of the CA and the CA's familiarity with two-line VCO. NAD/TAN/CAN reports, for example, that when one of its members attempted a conference call with a two-line VCO, set-up was extremely time-consuming due to lack of CA experience, and then the CA was unable to keep up with the call. *Id.* at n.32.

various types of TRS.<sup>126</sup>

**b. HCO-to-TTY and HCO-to-HCO**

31. Background. In the *Improved TRS FNPRM*, we sought comment on whether we should require HCO-to-TTY and HCO-to-HCO calling.<sup>127</sup> An HCO-to-TTY call allows a TRS conversation to take place between an HCO user and a TTY user, with a CA transliterating or interpreting as required by the parties to the call. An HCO-to-HCO call allows a TRS conversation to take place between two HCO users, with a CA transliterating or interpreting as required by the parties to the call.

32. Discussion. The record demonstrates that HCO-to-TTY and HCO-to-HCO calls are being provided by TRS providers, are technologically feasible and are desired by TRS users.<sup>128</sup> There were no comments against requiring these types of calls. We therefore adopt rules to require that these types of HCO calls be provided on an interstate and intrastate basis.<sup>129</sup>

**c. VCO-to-TTY and VCO-to-VCO**

33. Background. In the *Improved TRS FNPRM*, we sought comment on whether we should require VCO-to-TTY and VCO-to-VCO calling.<sup>130</sup> A VCO-to-TTY TRS call allows a relay conversation to take place between a VCO user and a TTY user, with a CA transliterating or interpreting as required by the parties to the call. A VCO-to-VCO call allows a conversation to take place between two VCO users, with the conversation being relayed by the CA transliterating or interpreting as required by the parties to the call.

34. Discussion. The record again demonstrates that VCO-to-TTY and VCO-to-VCO calls are being provided by TRS providers, are desired by and provide distinct benefits to TRS users, and are technologically feasible.<sup>131</sup> There were no comments against requiring these types of calls.<sup>132</sup> We therefore require that these VCO calls be provided on an interstate and intrastate

<sup>126</sup> See discussion at section VI.B.2.a of this *Order*.

<sup>127</sup> *Improved TRS FNPRM* at ¶ 138.

<sup>128</sup> See, e.g., WorldCom Comments at 18; see also [www.hamilton.net/relay/VCO.html](http://www.hamilton.net/relay/VCO.html); [www.deafhh.org/relay.pdf](http://www.deafhh.org/relay.pdf); [www.sprintbiz.com/government/sprint.relay/features](http://www.sprintbiz.com/government/sprint.relay/features).

<sup>129</sup> A related type of TRS call is HCO-to-VCO, which allows an HCO TRS user to call a VCO TRS user, with the conversation being relayed by a CA transliterating or interpreting as required by the parties to the call. We did not seek comment on whether to require HCO-to-VCO and therefore will not make it a part of our mandatory minimum standards. Currently, several TRS providers voluntarily offer HCO-to-VCO calling.

<sup>130</sup> *Improved TRS FNPRM* at ¶ 138.

<sup>131</sup> See, e.g., NAD-TAN Comments at 30; SHHH Comments at 3-4.

<sup>132</sup> We note that TRS is defined as a telephone transmission service that provides the ability for an "individual who has a hearing impairment or speech impairment" to communicate by wire or radio with "a hearing individual," 47 U.S.C. § 225(a)(3), and that TRS calls such as VCO-to-TTY and VCO-to-VCO do not necessarily involve a "hearing person." Nevertheless, because they require the use of a CA to facilitate the conversation, and can be considered a type of a VCO call, they are a type of TRS. This conclusion is also compelled by the anomalous situation that would otherwise result by comparing HCO-TTY and HCO-HCO calls to VCO-TTY and VCO-to VCO calls. Since HCO-TTY and HCO-HCO calls,

(continued....)



basis.<sup>133</sup>

**d. Waivers for IP Relay and VRS**

35. Background. In the *IP Relay Declaratory Ruling*, we waived for one year the requirement that IP Relay providers be accessible by voice, *i.e.*, that IP Relay providers offer VCO and STS, because of the technological limitations of providing these services at that time.<sup>134</sup> The record demonstrated that voice calls were possible if the customer has a microphone, a sound card, and Internet telephony software.<sup>135</sup> The record further indicated, however, that the quality of voice calls via a computer and the Internet is poor and dependent on the quality of the user's customer's premise equipment (CPE), frequently resulting in the CA being unable to accurately relay conversations.<sup>136</sup> Several parties filed petitions for reconsideration of the *IP Relay Declaratory Ruling*, asserting that HCO calls confront similar technological limitations as VCO calls, and therefore HCO calling over IP Relay should also be waived. We granted limited waivers for IP Relay providers in the *IP Relay Reconsideration Order*, and recently extended the one-year waivers granted in the *IP Relay Declaratory Ruling* to five-years.<sup>137</sup> In the *STS/VRS Waiver Order*, we temporarily waived requirements for VRS providers to include video-based STS and Spanish relay and other text-to-speech related mandatory minimum standards.<sup>138</sup>

36. Discussion. Consistent with the *IP Relay Reconsideration Order*,<sup>139</sup> and the *STS/VRS Waiver Order*,<sup>140</sup> we will waive the requirement that IP Relay and VRS providers provide the VCO-to-TTY, HCO-to-TTY, VCO-to-VCO, and HCO-to-HCO types of TRS calls that we otherwise mandate in this *Report and Order*. This waiver shall apply to all other current and potential IP Relay and VRS providers beginning on the release date of this *Order*. As set

---

(...continued from previous page)

see ¶¶ 29-30, *supra*, involve persons with speech disabilities (*i.e.*, the HCO user), such calls fall within the definition of TRS requiring that a party be a "hearing individual." We do not believe that Congress could have intended to favor persons with speech disabilities over persons with hearing disabilities in their access to TRS. In other words, we do not believe that only HCO-TTY and HCO-HCO calls, and not VCO-TTY and VCO-to VCO calls, should be considered TRS merely because the former calls involve a hearing individual (but with a speech disability) whereas the latter calls involve persons with hearing disabilities.

<sup>133</sup> A related type of TRS call is VCO-to-HCO, which allows a VCO TRS user to call an HCO TRS user, with the conversation being relayed by a CA transliterating or interpreting as required by the parties to the call. We did not seek comment on whether to require VCO-to-HCO and therefore will not make it a part of our mandatory minimum standards. Currently, several TRS providers voluntarily offer VCO-to-HCO calling.

<sup>134</sup> *IP Relay Declaratory Ruling* at ¶ 57.

<sup>135</sup> See *IP Relay Declaratory Ruling* at ¶ 32.

<sup>136</sup> *Id.*

<sup>137</sup> See, *e.g.*, *IP Relay Order on Reconsideration*, FCC 03-46 at ¶ 1.

<sup>138</sup> See *STS/VRS Waiver Order*, FCC 01-371, 16 FCC Rcd 22,948 at ¶¶ 26-27.

<sup>139</sup> See, *e.g.*, *IP Relay Order on Reconsideration*, FCC 03-46 at ¶ 1.

<sup>140</sup> See *STS/VRS Waiver Order*, FCC 01-371, 16 FCC Rcd 22,948 at ¶¶ 26-27.

forth in the *IP Relay Reconsideration Order*, for administrative convenience all waivers granted will expire on January 1, 2008. These waivers will be contingent on IP Relay and VRS providers filing an annual report with the Commission detailing the technological changes in these areas, the progress made, and the steps taken to resolve the technological problems that prevent IP Relay and VRS providers from offering these types of TRS calls. For administrative efficiency, the first annual report on all waivers will be due twelve months from the date of publication of the *IP Relay Reconsideration Order* in the *Federal Register*.<sup>141</sup>

## 2. Handling of Emergency Calls

37. Background. Dialing 911 is the most familiar and effective way Americans have of finding help in an emergency.<sup>142</sup> The Americans with Disabilities Act (ADA)<sup>143</sup> requires that all Public Safety Answering Points (PSAPs) reached via a 911 call provide direct, equal access to their services for people with disabilities who use TTYs.<sup>144</sup> Persons with hearing disabilities may call 911 using their TTY, and this is the recommended method for reaching assistance; however, when an emergency wireless call is made via a TRS facility, made by dialing 711 or another direct dialing TRS access number, there are additional technological challenges to routing that wireless emergency call from the TRS facility to the appropriate PSAP.<sup>145</sup>

38. In the *Improved TRS Order*, we concluded that emergency TRS calls should be routed to the *appropriate* Public Safety Answering Point (PSAP),<sup>146</sup> however, the mandatory minimum standards rule in section 64.604(a)(4) of our rules was amended to state that emergency TRS calls should be routed to the *nearest* PSAP.<sup>147</sup> As a result, in the *Public Safety Answering Point Public Notice*, the Commission sought comment on whether to amend the regulations to require TRS facilities to use a system for routing emergency TRS calls that would automatically and immediately route a caller to the *appropriate* PSAP, as we had originally

<sup>141</sup> The *IP Relay Order on Reconsideration* was published April 16, 2003, at 68 FR 18825.

<sup>142</sup> See <http://www.fcc.gov/cgb/dro/doj911es.htm>.

<sup>143</sup> The Department of Justice's ADA regulations are published at 28 C.F.R. Part 35.

<sup>144</sup> Title II of the ADA covers "public entities." "Public entities" include any State or local government and any of its departments, agencies, or other instrumentalities. Title II public entities include telephone emergency service providers. All activities, services, and programs of public entities are covered, including activities of State legislatures and courts, town meetings, police and fire departments, motor vehicle licensing, and employment. To obtain a copy of the ADA or its implementing regulations, or if you have questions about the ADA, contact the Department of Justice ADA Information Line at (800) 514-0301 (voice), or (800) 514-0383 (TTY), or access the Department's ADA Home Page at <http://www.usdoj.gov/crt/ada/adahom1.htm>.

<sup>145</sup> We address routing of wireless emergency calls through a TRS facility in more detail later in this section.

<sup>146</sup> *Improved TRS Order* at ¶¶ 99-102.

<sup>147</sup> 47 C.F.R. § 64.604(a)(4); see also *Improved TRS Order on Reconsideration*, FCC 00-200, 16 FCC Rcd 4054 (2000) at ¶ 6 (similarly concluding that emergency TRS calls should be routed to the appropriate PSAP, but text of rule nevertheless remained unchanged).

concluded in the *Improved TRS Order*.<sup>148</sup> This distinction is important because, in some cases, routing a call to the PSAP that is nearest in proximity to the caller may delay emergency assistance.<sup>149</sup>

39. We note that, currently, for emergency voice calls, service providers do not use geographic proximity as the sole criterion for determining the appropriate PSAP to which an emergency call should be routed.<sup>150</sup> Instead, service providers automatically route emergency voice calls to the appropriate PSAP based on a combination of caller location information stored in Automatic Location Identification (ALI) databases and PSAP location information stored in locally and regionally managed databases.<sup>151</sup>

40. Discussion. We conclude that, consistent with the functional equivalency mandate, emergency calls made through TRS must be routed to an "appropriate" PSAP.<sup>152</sup> We therefore reject proximity as the primary criterion for determining to which PSAP an emergency TRS call should be routed. As we have noted, we reached this same conclusion in the *Improved TRS Order*.<sup>153</sup> The conclusion that emergency TRS calls must be routed to the "appropriate," and not necessarily the "nearest," PSAP leaves open the question of how to define

---

<sup>148</sup> See *Pleading Cycle Established for Comment on Clarification of Procedures for Emergency Calls at Telecommunications Relay Services (TRS) Centers*, DA 02-1826, Public Notice, July 29, 2002 (PSAP Public Notice) (emphasis added).

<sup>149</sup> Intrado PSAP Public Notice Comments at 2; MD-TAM PSAP Public Notice Comments at 1; TDI PSAP Public Notice Comment at 5; Verizon PSAP Public Notice Comments at 2.

<sup>150</sup> Some caution must be exercised, however, when TRS calls involve a party on a wireless telephone. The mobile switch may be able to determine a non-TRS caller's location well enough to direct a 911 call to the appropriate PSAP. However, with a TRS call, the mobile switch is not handling a 911 call, but rather a 711 call (i.e., a call to a TRS facility). In order for the TRS facility to route a subsequent emergency call appropriately, it would need to receive both Caller ID and caller location information from the mobile switch that received the initial TRS call (not such information from the TRS facility that has called 911 for the TRS user). See, e.g., *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, IB Docket No. 99-67, Further Notice of Proposed Rulemaking, FCC 02-326, 17 FCC Rcd 25,576 (2002); *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Phase II Compliance Deadlines for Non-Nationwide CMRS Carriers*, CC Docket No. 94-102, Order to Stay, FCC 02-210, 17 FCC Rcd 14,841 (2002); *Carrier Transition Reports for Implementation of the 911 Abbreviated Dialing Code Pursuant to the Wireless Communications and Public Safety Act of 1999*, CC Docket No. 92-105, WT Docket No. 00-110, Public Notice, DA 02-507 (rel'd March 01, 2002).

<sup>151</sup> See NENA/APCO/NASNA PSAP Public Notice Comments at 2; Sprint PSAP Public Notice Comments at 2, Reply Comments at 2; Verizon PSAP Public Notice Comments at 2; PSAP Public Notice Reply Comments at 2.

<sup>152</sup> Many commenters support this conclusion. See, e.g., AT&T PSAP Public Notice Comments at 4; DSA PSAP Public Notice Comments at 1; Intrado PSAP Public Notice Comments at 3; MD-TAM PSAP Public Notice Comments at 2; NENA/APCO/NASNA PSAP Public Notice Comments at 3; Sprint PSAP Public Notice Comments at 3.

<sup>153</sup> *Improved TRS Order* at ¶¶ 99-102.

“appropriate.”<sup>154</sup>

**a. Appropriate PSAP - Wireline**

41. In the wireline context, when a voice caller dials 911, the LEC uses the caller’s NPA-NXX-XXXX<sup>155</sup> to search a database and find the “appropriate” PSAP.<sup>156</sup> Some commenters therefore request that the Commission define the “appropriate” PSAP as “the PSAP to which a direct call from a NPA-NXX-XXXX would be delivered.”<sup>157</sup> We agree. Based on the record, and our responsibility to ensure that TRS users receive functional equivalent service, we define “appropriate” PSAP as the designated PSAP to which a direct call from the particular number would be delivered.<sup>158</sup>

42. In order to ensure that an emergency TRS call will be routed to the appropriate PSAP, TRS providers must have a reliable and accurate PSAP database. Several TRS providers note that having complied with the requirement to route emergency calls to the nearest PSAP, they may now have to develop a new system to ensure that emergency calls will be routed to the appropriate PSAP.<sup>159</sup> Commenters report, however, that PSAP databases are available from a variety of resources so that TRS facilities may expeditiously take the steps necessary to implement a system to route emergency calls to the appropriate PSAP.<sup>160</sup> Because the record does not reflect that a longer time period is necessary for providers to make this change, we require that all TRS facilities be able to pass emergency callers to the appropriate PSAP within twelve months of publication of this *Order* in the *Federal Register*.<sup>161</sup> We require, under our functional equivalency mandate, that TRS facilities ensure that any database used to route a TRS

<sup>154</sup> Numerous parties filed comments asking for the Commission to define “appropriate.” See, e.g., Maryland Dept. Of Budget and Mgt PSAP Public Notice Comments at 1; Sprint PSAP Public Notice Comments at 2; Sprint PSAP Public Notice Reply Comments at 2; TDI PSAP Public Notice Comments at 2-3; Verizon PSAP Public Notice Comments at 2.

<sup>155</sup> Ten-digit telephone numbers are generically expressed as “NPA-NXX-XXXX.” See TDI PSAP Public Notice Comments at 6.

<sup>156</sup> Cf. e.g., Deaf Seniors of America PSAP Public Notice Comments at 1; NENA/APCO/NASNA PSAP Public Notice Comments at 2; Intrado PSAP Public Notice Comments at 1-3; Maryland Dept. Of Budget and Mgt PSAP Public Notice Comments 1; TDI PSAP Public Notice Comments at 2-6, with, e.g., AT&T PSAP Public Notice Comments at 2; Sprint PSAP Public Notice Comments at 2-3.

<sup>157</sup> See, e.g., Maryland Dept. Of Budget and Mgt PSAP Public Notice Comments 1; TDI PSAP Public Notice Comments at 6.

<sup>158</sup> See 47 C.F.R. § 64.3000(c) (defining the Public Safety Answering Point (PSAP) as a facility that has been designated to receive 911 calls and route them to emergency services personnel). See also 47 C.F.R. § 20.3 (defining “designated PSAP” to be the PSAP designated by the local or state entity that has the authority and responsibility to designate the PSAP to receive wireless 911 calls.”).

<sup>159</sup> See, e.g., AT&T PSAP Public Notice Comments at 3-4; Intrado PSAP Public Notice Comments at 3-4; NENA/APCO/NASNA PSAP Public Notice Comments at 3; Sprint PSAP Public Notice Comments at 2.

<sup>160</sup> See, e.g., AT&T PSAP Public Notice Comments at 2-3; NENA/APCO/NASNA PSAP Public Notice Comments at 3; Sprint PSAP Public Notice Reply Comments at 2.

<sup>161</sup> We note that many TRS facilities have been relaying TTY calls to the appropriate PSAP since the publication of the *Improved TRS Order*.

emergency call to a PSAP will be updated on the same schedule that PSAP routing databases are updated for 911 calls placed by voice telephone users.

**b. Appropriate PSAP - Wireless**

43. In the wireless context, when a caller dials 911, the call is routed to the PSAP associated with the location of the caller.<sup>162</sup> This location is determined based on the location information of the cell site transmitting the call or other information on the caller's location, depending on the technological capabilities of the wireless carrier carrying the call. In other words, the appropriate PSAP is the PSAP designated by the local or state authority to receive wireless 911 calls based on the location of the caller.

44. When an emergency wireless call is a TRS call, however, and is made by dialing 711 or another direct dialing TRS access number, there are additional technological challenges to routing that call from the TRS facility to the appropriate PSAP. When a wireless caller dials a TRS facility with an emergency call, the TRS facility cannot use the same method to determine the appropriate PSAP as is done in wireline context. The TRS facility's equipment cannot query a database of exchanges to find the PSAP associated with a caller's NPA-NXX-XXXX because there is no correlation between a wireless telephone number and location of a person making a call with wireless equipment. Further, although many TRS providers maintain caller profiles that may provide the name, address, emergency contact, and other identifying information about the TRS caller which can be accessed in case of an emergency, this information does not necessarily assist in locating a wireless caller's location at the time of the emergency.

45. Accordingly, in the wireless context, in order to route an emergency call to the appropriate PSAP, the TRS provider must find an alternative way to identify the location of the caller and the phone number of the designated PSAP for that location.<sup>163</sup> If a call is being transmitted to the TRS facility by a wireless carrier that has deployed Enhanced 911 Phase I or Phase II<sup>164</sup> capabilities in the caller's area,<sup>165</sup> then the wireless carrier may be able to forward the location information of the cell site transmitting the call or other information on the caller's

<sup>162</sup> See, e.g., *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, IB Docket No. 99-67, Further Notice of Proposed Rulemaking, FCC 02-326, 17 FCC Rcd 25,576 (2002); *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Phase II Compliance Deadlines for Non-Nationwide CMRS Carriers*, CC Docket No. 94-102, Order to Stay, FCC 02-210, 17 FCC Rcd 14,841 (2002); *Carrier Transition Reports for Implementation of the 911 Abbreviated Dialing Code Pursuant to the Wireless Communications and Public Safety Act of 1999*, CC Docket No. 92-105, WT Docket No. 00-110, Public Notice, DA 02-507 (*rel'd* March 01, 2002).

<sup>163</sup> Cf. e.g., *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, IB Docket No. 99-67, Further Notice of Proposed Rulemaking, FCC 02-326, 17 FCC Rcd 25,576 (2002); *Carrier Transition Reports for Implementation of the 911 Abbreviated Dialing Code Pursuant to the Wireless Communications and Public Safety Act of 1999*, CC Docket No. 92-105, WT Docket No. 00-110, Public Notice, DA 02-507 (*rel'd* March 01, 2002).

<sup>164</sup> Phase I Enhanced 911 (E911) calls automatically report the telephone number and location of the antenna that received the call. Phase II requires wireless carriers to provide for more precise location information (within 50-300 meters).

<sup>165</sup> See 47 C.F.R. § 20.18(d).

location to the TRS facility. The TRS facility, in turn, would need to have software and a database in place so the PSAP telephone number associated with the location of the caller, or the cell site transmitting the call, can be obtained and dialed. Wireless carriers that are not Phase I or Phase II E911 capable likely will not be able to share any location information with the TRS facility, in which case the TRS facility will not have a means to identify the PSAP to which the call would have been sent if the caller dialed 911 (instead of 711) on a wireless telephone.

46. It is in the public interest to ensure that TTY users receive functionally equivalent service if they dial 711 or another direct dialing TRS access number in lieu of 911 in case of an emergency.<sup>166</sup> Providing TRS facilities with the ability to determine the appropriate PSAP not only furthers the objectives of Title IV of the ADA, but may also save lives. This ability is critical to appropriately respond to any call, including calls that may not initially involve emergency situations, but turn into emergency calls while the caller is still on the TRS network. Accordingly, in the *NPRM*, we will seek comment on options that a TRS facility may use to determine the location of the wireless caller so that the TRS facility can route an emergency call to the same PSAP that would have received the call if the wireless caller first dialed 911.<sup>167</sup>

### 3. Access to Speech-to-Speech Relay Services

#### a. Separate STS Nationwide Number

47. Background. In the *Improved TRS FNPRM*, the Commission sought comment on whether it should adopt a separate STS-specific nationwide dialing access number, different than 711, or whether access through 711<sup>168</sup> was sufficient to meet the needs of persons with speech disabilities.<sup>169</sup> The comments reflect that persons with speech disabilities often find that they are unsuccessful, or unreasonably delayed, in their attempts to access STS relay services when dialing 711.<sup>170</sup> For example, some commenters assert that TRS CAs who first receive incoming STS calls often are not adequately trained to understand persons with speech disabilities, and therefore do not adequately handle the TRS call for such persons.<sup>171</sup>

48. The comments reflect that STS consumers prefer to be able to call a number and

---

<sup>166</sup> Because of the limitations on the ability of TRS facilities to determine a wireless caller's location, dialing a TRS facility is currently not as effective a means to transmit wireless emergency calls to the appropriate PSAP as a direct call to 911 on a wireless telephone. See the FCC's Consumers' Guide to Telecommunications Relay Service (TRS), available at <http://www.fcc.gov/cgb/dro/trs/dial7-911.html#911>. See also the Department of Justice's Fact Sheet on TTY Access for 911 and Telephone Emergency Services, available at <http://www.fcc.gov/cgb/dro/doj911es.html>.

<sup>167</sup> See discussion of emergency call handling over wireless telephones and equipment at section VI.B.1.b, *infra*.

<sup>168</sup> See *In the Matter of The Use of N11 Codes and Other Abbreviated Dialing Arrangements, Second N11 Report and Order*, 16 FCC Rcd 15188 (2000). Nationwide 711-dialing access is designed to allow any TRS user to initiate calls from any telephone, anywhere in the United States, and be connected to the TRS facility serving that calling area. 711 dialing access for TRS became effective on October 1, 2001.

<sup>169</sup> *Improved TRS NPRM* at ¶ 126.

<sup>170</sup> See generally Segalman Comments.

<sup>171</sup> *Improved TRS Order* at ¶ 15. See also, e.g., Segalman Comments.

be connected directly to a specially trained STS CA.<sup>172</sup> STS consumers state that it would be most convenient for an STS consumer to access STS relay services through an STS-dedicated 3-digit number. They note that many persons with speech disabilities also have associated physical and memory disabilities, and therefore find it easier to dial a 3-digit number than a ten-digit number.<sup>173</sup> Some LEC commenters assert, however, that a separate 10-digit nationwide toll free number for STS consumers is the only technologically feasible approach to directly route a TRS consumer to STS relay services.<sup>174</sup> USTA, on the other hand, counters that adoption of a separate nationwide 10-digit STS toll-free number would raise numerous implementation and maintenance issues.<sup>175</sup>

49. Discussion. The Commission recognizes that STS consumers desire a dedicated, 3-digit, STS-specific TRS access dialing number;<sup>176</sup> however, we believe it is premature at this time to designate a 3-digit access code for STS relay service, and therefore we decline to do so. 711 dialing is a relatively new service, and because there are a limited number of N11 codes such 3-digit codes must be allocated cautiously.<sup>177</sup> Moreover, allowing 711 access for calls to all types of TRS services, including STS, is consistent with the Commission's objective for initiating 711 access.<sup>178</sup>

50. The record also reflects that adopting a nationwide 10-digit STS access number could lead to a long and perhaps confusing list of TRS dialing access numbers for different types of TRS services.<sup>179</sup> The adoption of a dedicated 10-digit STS access number would also contradict the objective of requiring universal, nationwide 711 access to TRS.<sup>180</sup> For these reasons, we also decline to adopt a dedicated 10-digit STS number.

51. The Commission believes that the existing 711 number adequately provides a

---

<sup>172</sup> See, e.g., Segalman Comments and STS Consumers Comments *passim*; SHHH Comments at 5.

<sup>173</sup> See, e.g., Segalman Comments; STS Consumer Comments. The Commission reminds TRS providers that Commission rules require that they ensure that CAs are sufficiently trained to effectively meet the specialized communication needs of TRS consumers. See 47 C.F.R. § 64.604(a)(1).

<sup>174</sup> See, e.g., AT&T Comments at 2; Bell Atlantic Comments at 2; Sprint Comments at 2 n.2.

<sup>175</sup> For example, USTA states that providing national 800 access could require modifying the toll-free database used for the routing of STS calls and billing information. USTA Comments at 2-5. See also SBC Comments at 1-3.

<sup>176</sup> See, e.g., Segalman Comments and STS Consumers Comments *generally*; SHHH Comments at 5. *But see, e.g.,* WorldCom Comments at 1-2 (extend the speed of answer requirement to accommodate the additional time needed for 711 calls to reach the appropriate CA).

<sup>177</sup> See *Second N11 Report and Order*, 16 FCC Rcd 15188 (2000).

<sup>178</sup> *Id.*

<sup>179</sup> See, e.g., Segalman Comments and STS Consumers Comments *generally*; SBC Comments at 1-3; USTA Comments at 4-5. *But see* AT&T Comments at 2; Bell Atlantic Comments at 2; Sprint Comments at 2 n.2.

<sup>180</sup> See *Second N11 Report and Order*, 16 FCC Rcd 15188 (2000)(711 must be accessible for any type of TRS call).

means for STS consumers to reach an STS CA.<sup>181</sup> In any 711 call, the CA has to route and/or set up the call according to the form of TRS (*i.e.*, STS) or type of TRS call (*i.e.*, HCO, VCO) requested.<sup>182</sup> We also note that nearly all state TRS programs provide STS relay access by having the 711 CA manually transfer the call to a designated STS CA.<sup>183</sup> Further, state TRS programs and TRS providers are responsible for ensuring that they provide STS to TRS consumers in a manner that complies with our mandatory minimum standards.<sup>184</sup> To the extent that STS calls are not reaching STS CAs in an appropriate fashion, the TRS provider may have to provide additional CA training, deploy advanced technologies, or offer multiple dialing options.<sup>185</sup>

#### b. Use of Dialing Menu

52. Background. In the *Improved TRS FNPRM*, the Commission asked for comment on ways to “make TRS more functionally equivalent for TRS users.”<sup>186</sup> In response, some commenters suggest that access to STS relay service through 711 could be improved by use of a dialing menu (*i.e.*, an Interactive Voice Response (IVR) or Interactive Text Response system for TTY users), with STS the first option in the voiced dialing menu.<sup>187</sup> In this way, STS users would simply need to “press” the first key indicated to make their type of call selection, such as STS or HCO. STS consumers favor this approach if there is no STS-designated 3-digit dialing code.<sup>188</sup>

53. Discussion. The record shows that some states are currently utilizing a dialing

---

<sup>181</sup> See, *e.g.*, AT&T Comments at 3; Bell Atlantic Comments at 2; SBC Comments at 1-2; Sprint Comments at 2.

<sup>182</sup> In addition to a TTY-to-voice/voice-to-TTY call setup, TRS facilities are required to handle VCO, HCO, certain non-English TRS calls, and STS. 47 C.F.R. §§ 64.603, 64.604(a)(3). As a result of this *Order*, TRS facilities will soon also be required to provide two-line VCO and two-line HCO calls, as well as VCO-to-VCO, VCO-to-TTY, HCO-to-HCO, and HCO-to-TTY.

<sup>183</sup> Maryland Dept. of Budget and Mgt. Comments at 1.

<sup>184</sup> The *Second N11 Report & Order* makes clear that the implementation of 711 access to TRS does not alter the mandatory minimum standards for TRS. We also note that the speed of answer rule provides that the speed of answer time concludes when the originating call reaches the first CA, not when the call reaches a designated STS CA. 47 C.F.R. § 64.604(b)(2).

<sup>185</sup> We note that many state TRS programs currently provide access to STS relay service via a designated STS toll-free number, their traditional TRS toll-free number, and/or by dialing 711. For example, the Maryland State Relay Program maintains three options for STS dialing access, asserting this makes their service more functionally equivalent for STS users because it allows STS users to select from different telephone numbers. See, *e.g.*, Maryland Dept. of Budget and Mgt. Comments at 12. The Commission encourages TRS providers to maintain existing alternative seven or ten-digit dialing numbers for STS because this will enable frequent TRS users to maximize call-processing efficiency, program speed-dialing, and have multiple dialing options for accessing STS relay services. See *Second N11 Report & Order* at ¶ 28.

<sup>186</sup> See *Improved TRS FNPRM* at ¶ 126.

<sup>187</sup> See generally Segalman Reply Comments; STS Consumer Comments.

<sup>188</sup> See generally Segalman Reply Comments.



menu that includes a means of facilitating access to STS, with the default menu option connecting to a TTY after a designated period of time if no selection is made.<sup>189</sup> As we continue to monitor the implementation of universal nationwide 711 dialing access for all types of TRS calls, we will also monitor the utilization of dialing menus for access to STS. We will therefore not require the use of dialing menus at this time, although we encourage TRS facilities to be innovative in order to provide convenient and efficient access to TRS services for all consumers.<sup>190</sup> Finally, we note that although a dialing menu may make it take longer for TRS and STS consumers to reach the appropriate CA for their desired relay service, and a reasonable amount of time is acceptable in these circumstances and still not violate our speed of answer requirement.<sup>191</sup>

## C. Technical Standards

### 1. Equal Access to Interexchange Carriers

54. Our present TRS mandatory minimum standards provide that "TRS users shall have access to their chosen interexchange carrier through the TRS, and to all other operator services, to the same extent that such access is provided to voice users."<sup>192</sup> That regulation was adopted in our first TRS Report and Order that adopted the TRS mandatory minimum standards; therefore, like all of those standards, it was intended to help define functional equivalency.<sup>193</sup> We have construed this rule to mean that TRS users must be able to use their "long distance carrier of choice when making relay calls."<sup>194</sup> We have emphasized that "[i]f TRS users are not able to use their carrier of choice and are forced to select an alternate provider, they may pay rates that are higher than those charged by their preferred carrier, or may not have access to

<sup>189</sup> See generally Segalman Comments.

<sup>190</sup> Some TRS providers suggest that TRS facilities offer caller profiling so that a TRS consumer can designate his or her preferred type of relay service, including, for example their preferred type of TRS call (such as STS, VCO, HCO), which CA gender they prefer, whether the CA should type out the background information, and what CA speed of typing they prefer. See, e.g., AT&T Comments at 4-6; Bell Atlantic Comments at 11-12. Caller profiles may speed up the call processing time by enabling a TRS facility to more quickly and efficiently identify the type of incoming call, and then automatically route the call to an appropriate CA or other call set-up. We believe that these methods of handling the growing number of types of TRS calls could facilitate call set-up and could result in more efficient service. TRS facilities may determine which features most efficiently and effectively respond to STS relay requests, as long as the chosen method is consistent with our mandatory minimum standards.

<sup>191</sup> See 47 C.F.R. § 64.604(b)(2). The *Speed of Answer* rule provides, in relevant part, that "TRS shall, except during network failure, answer 85 percent of all calls within 10 seconds by any method which results in the caller's call immediately being placed, not put in a queue or on hold. The ten seconds begins at the time the call is delivered to the TRS facility's network. The call is considered delivered when the relay center's equipment accepts the call from the local exchange carrier and the public switched network actually delivers the call to the TRS facility."

<sup>192</sup> 47 C.F.R. § 64.604(b)(3).

<sup>193</sup> See *First TRS Report and Order* at ¶ 22; see generally 47 C.F.R. § 64.604.

<sup>194</sup> See *Improved TRS Order* at ¶ 85.

particular services.”<sup>195</sup> We further noted that both results are “inconsistent with the ADA and the Commission’s rules.”<sup>196</sup>

55. We have recognized, however, that TRS providers do not have complete control over whether the TRS consumer will be able to access his or her carrier of choice. A TRS consumer will be able to access his or her IXC of choice only if that IXC has the ability to accept a call from the TRS provider.<sup>197</sup> The statute and regulations require each IXC offering voice transmission service to offer TRS. Section 225(c) states that “each common carrier providing voice transmission services shall ... provide” TRS “throughout the area in which it offers service,” and may do so “individually, through designees, through a competitively selected vendor, or in concert with other carriers.”<sup>198</sup> It is this statutory obligation of each IXC offering voice transmission service to offer TRS throughout its service area that makes it possible for the TRS consumer to have access to his or her long distance carrier (IXC) of choice. Put another way, while the regulations require TRS providers to offer their TRS consumers access to the consumers’ long distance carrier of choice, the statute and the regulations require each IXC to provide TRS, and it is the latter obligation that makes the former obligation possible.<sup>199</sup>

56. As we have previously explained, as a general matter an IXC can ensure that TRS consumers can have access to its service in one of two ways: either the IXC can build or lease facilities that interconnect with the LEC serving the TRS facility, or the IXC can purchase and resell the services of another IXC that already has access to the TRS facility.<sup>200</sup> As we further explained, “in those instances when IXCs elect not to interconnect with the LEC facilities that

---

<sup>195</sup> Common Carrier Bureau Reminds All Common Carriers of Their Obligation to Provide Access to Their Telecommunications Service via Telecommunications Relay Services, DA 99-1871, Public Notice, 15 FCC Rcd 9916, 9917 (1999) (*Carriers’ Obligation Public Notice*).

<sup>196</sup> *Id.* (citing 47 U.S.C. 225(c); 47 C.F.R. §§ 64.603, 64.604(b)(3)). We note that in the *IP Relay Declaratory Ruling* the Commission permanently waived the carrier of choice requirement for IP Relay calls provided the IP Relay consumer is not charged for any long distance part of the call. See *IP Relay Declaratory Ruling*, 17 FCC Rcd 7779 at ¶ 31.

<sup>197</sup> See Enforcement Bureau Issues Letter in Support of Initiatives by the Maryland Public Service Commission to Promote Compliance with FCC Rules Pertaining to Telecommunications Relay Services, DA No. 00-2383, Public Notice (*rel’d* Oct. 23, 2000) (*Enforcement Bureau Compliance Letter Public Notice*).

<sup>198</sup> 47 U.S.C. § 225(c); see also 47 C.F.R. § 64.603 (same).

<sup>199</sup> Because “each” common carrier offering telephone voice transmission service must provide TRS in its service area, local exchange carriers, as well as IXCs, have the obligation to offer TRS. Most common carriers that offer local telephone service comply with this obligation through the state’s competitive selection of a TRS provider. In other words, once a state selects its “competitively selected vendor,” see 47 C.F.R. § 604.603, the other common carriers in the state that offer local telephone service are deemed to have met their obligation to provide TRS. Most states select only one TRS provider for their state program. As a result, as a practical matter this means that TRS users must use their state’s chosen TRS provider for their local (non-toll) calls. See *1998 TRS Notice of Proposed Rulemaking* at ¶ 63.

<sup>200</sup> See *1998 TRS Notice of Proposed Rulemaking* at ¶ 63. TRS facilities operated by LECs do not have this problem because they have interconnection agreements with all IXCs doing business in their operating territory.

serve the TRS provider's facilities, resale of another IXC's services may be a cost efficient alternative for obtaining connectivity with the TRS facility for purposes of completing calls placed by TRS users."<sup>201</sup>

57. In September 1999, we issued a Public Notice reminding common carriers of their obligation to provide access to their services via TRS, stating that "[c]arriers should take appropriate measures to ensure that callers in the areas that they serve have access to their services through TRS."<sup>202</sup> We also made clear that the ability of TRS consumers to access their carrier of choice rested on common carriers meeting their obligation "to allow access via TRS to their services throughout the area(s) in which they offer service."<sup>203</sup>

58. In October 2000, in another Public Notice, we revisited the interplay between the carrier of choice rule and the statutory obligation of all common carriers to provide TRS. The Public Notice detailed a letter the Enforcement Bureau sent to a state relay administrator addressing this issue. We noted that in order for a TRS user to be able to access his or her carrier of choice, "it is incumbent on the IXC to contact the TRS provider and ensure that the TRS provider has sufficient information about the IXC's network and billing requirements to properly route TRS calls to the IXC."<sup>204</sup> We further noted that notwithstanding "the warnings to carriers in the *Improved TRS Order* and the 1999 Public Notice,"<sup>205</sup> it is clear that TRS users in many states do not currently have the same access to their carrier of choice as non-TRS users."<sup>206</sup> We made it clear that although the TRS providers have the obligation under our regulations to ensure that TRS consumers can access their IXC of choice, IXCs that did not currently offer TRS access in states where they offer service must make the necessary arrangements to ensure that TRS users can access their services."<sup>207</sup>

59. Although our present carrier of choice regulation provides that the wireline TRS consumer must have access to his or her IXC of choice, without expressly addressing the respective obligations of the IXCs and the state relay provider to make such access possible, we have made it clear that in view of section 225(c) each IXC must take affirmative steps to contact the state TRS providers to ensure that TRS consumers can access the particular IXC in making a TRS call. At the same time, the TRS providers must ensure that their TRS consumers can in fact access their chosen IXC, once it is possible for the TRS call to be routed to that IXC.

60. Despite our past efforts to make clear to wireline TRS providers and common

---

<sup>201</sup> *Id.*

<sup>202</sup> *Carriers' Obligation Public Notice*. The Commission noted that it had been informed that "some TRS users have been unable to place TRS calls through their chosen carrier or have been unable to make 'dial-around' calls using a carrier-specific access code."

<sup>203</sup> *Id.*

<sup>204</sup> *Enforcement Bureau Compliance Letter Public Notice*.

<sup>205</sup> *Carriers' Obligation Public Notice*.

<sup>206</sup> *Enforcement Bureau Compliance Letter Public Notice*.

<sup>207</sup> *Enforcement Bureau Compliance Letter Public Notice*. We also emphasized that "a carrier's failure to take appropriate steps to enable access to its service by TRS users may lead to monetary forfeitures or other enforcement actions by the Commission." *Id.* (footnote omitted).

carriers their respective obligations with respect to our carrier of choice rule, recent informal complaints filed with the Commission indicate that some TRS users remain unable to be connected with their IXC of choice when making a relay call.<sup>208</sup> Further, state TRS programs indicate low compliance by IXCs with the requirement that they make the necessary arrangements to ensure that TRS calls can be placed through their services.<sup>209</sup> Based on informal discussions with representatives of state TRS administrators, TRS providers, and some IXCs, it appears that the low compliance with the carrier of choice requirements may result from several factors. For example, TRS providers are not currently required to have facilities that connect the TRS facility to each LEC access tandem in the state. This is because in many cases the TRS facility is located either outside any major metropolitan area within the state or, in some cases, outside the state.<sup>210</sup> In addition, some IXCs serve only certain areas within a state. As a result, they may not have a Point of Presence (POP)<sup>211</sup> that connects them with the access tandem serving the TRS facility. Finally, we understand that some IXCs apparently still lack awareness of their obligation to ensure that TRS consumers can access their services, or believe – incorrectly – that their contribution to the Interstate TRS Fund satisfies their obligations under section 225 to provide TRS.

61. We therefore once again remind IXCs that, pursuant to section 225(c), they must take such affirmative steps as may be necessary to ensure that TRS providers can place TRS wireline consumers' long distance calls through their IXC if the consumer so chooses. To the extent it may not be possible for an IXC to interconnect with the LEC serving the TRS provider, the IXC must make other arrangements, as noted above, to obtain the required connectivity with the TRS facility. Further, we clarify, to the extent necessary, that the mere fact that a common carrier makes contributions to the Interstate TRS Fund, as required by section 225(d)(3)(B) and section 64.604(c)(5)(iii) of our regulations, does not relieve it of its obligation to provide TRS. The funding mechanism for the Interstate TRS Fund (implicating "[e]very carrier providing interstate telecommunications services") operates independently of the statutory obligation of "[e]ach common carrier providing voice transmission services" to provide TRS.<sup>212</sup> Finally, we again note that under the carrier of choice rule the TRS provider must ensure that the TRS consumer can use his or her IXC carrier of choice, unless that particular carrier has not made arrangements to be interconnected with the TRS provider's LEC.

## 2. Additional TRS Features and Services

62. The Commission is charged with ensuring that its TRS regulations do not discourage or impair the development of improved technology that might foster the availability

<sup>208</sup> The Commission's Consumer and Governmental Affairs Bureau received twelve informal complaints in 2002 regarding TRS carrier of choice issues.

<sup>209</sup> For example, out of approximately 350 IXCs registered in Maryland, 28 of those IXCs can be accessed via TRS. See Maryland Relay, <http://www.mdrelay.org/relay/lonmgdistancecarriers.htm>.

<sup>210</sup> For example, the TRS facility serving Kentucky is located in Baton Rouge, Louisiana. The TRS facility serving Wisconsin is located in Nebraska.

<sup>211</sup> Point of Presence (POP) is the IXC equivalent of a local phone company's central office; *i.e.*, it is where the long distance carrier (IXC) terminates its long distance lines and those lines are connected to the local telephone company's lines.

<sup>212</sup> *Cf.* 47 C.F.R. § 64.604(c)(5)(iii)(A) (emphasis added), with 47 U.S.C. § 225(c) (emphasis added).

of improved telecommunications services to persons with disabilities.<sup>213</sup> In view of this mandate, in the *Improved TRS FNPRM* we tentatively concluded that several types of innovative services that a TRS facility might provide to TRS consumers when the LEC network serving the TRS facility offers such services to the general public.<sup>214</sup> We sought comment on our tentative conclusions. As set forth below, we adopt rules requiring TRS facilities to make available to TRS consumers such features when they are available to the general public.<sup>215</sup> As discussed below, we find that additional types of features or services are being provided by TRS providers, are technologically feasible and are desired by TRS users. We therefore adopt rules to require that these additional features and services be provided on an interstate and intrastate basis within six months of publication of this *Order* in the *Federal Register*. Requiring TRS providers to provide these additional features and services is consistent with our mandate to seek to make available to persons with disabilities new telecommunications technologies.<sup>216</sup>

**a. Answering Machine Message Retrieval**

63. Background. In the *Improved TRS FNPRM*, we sought comment on the feasibility of providing answering machine message retrieval to TRS users.<sup>217</sup> Currently, there is no reference in our rules to retrieving answering machine messages through TRS.<sup>218</sup> This feature allows a TTY user to retrieve voice messages left on his or her voice mailbox or voice answering machine by an incoming call from a third party. Answering machine retrieval through TRS is accomplished when the recipient of the message, the TRS user, calls the TRS facility and has the CA listen to the voice messages.<sup>219</sup> The CA transmits the messages in text back to the TRS

<sup>213</sup> See 47 U.S.C. § 225(d)(2).

<sup>214</sup> See *Improved TRS FNPRM* at ¶ 138.

<sup>215</sup> The record does not demonstrate whether certain other features about which we initially sought comment, such as anonymous call rejection, V.18 and other TTY protocols should be required as part of the TRS mandatory minimum standards. See *Improved TRS Order* at ¶¶ 132, 138 respectively. We therefore seek further comment about these features in the *NPRM, infra*.

<sup>216</sup> See, e.g., 47 U.S.C. § 225(b)(1), (d)(2); 47 C.F.R. § 64.604(b)(5).

<sup>217</sup> *Improved TRS FNPRM* at ¶ 138.

<sup>218</sup> This is not to be confused with our rule on Voice Mail and Interactive Menus, which addresses TRS calls from a TRS user to a called third party that reaches the called party's voice mail or answering system's interactive menu. See 47 C.F.R. § 64.604(6). The Voice Mail and Interactive Menus rule addresses CAs handling such systems through TRS. Answering Machine Message Retrieval addresses on the process of retrieving messages for a person with a disability from his or her own answering machine or voice mail.

<sup>219</sup> We note that the TRS confidentiality rules apply when a CA listens to a voice message and transmits the message in text to the TRS user. 47 C.F.R. § 64.604(a)(2)(i) states that "[e]xcept as authorized by [47 U.S.C. § 605], CAs are prohibited from disclosing the content of any relayed conversation regardless of content, ... even if to do so would be inconsistent with state or local law." See also 47 U.S.C. § 225(d)(1)(F). 47 U.S.C. § 605(a) prohibits disclosure of interstate or foreign telephone conversations except in certain circumstances generally relating to law enforcement. See also, *In the Matter of Telecommunications Services for Hearing-Impaired and Speech Impaired Individuals, and the Americans with Disabilities Act of 1990, Notice of Proposed Rulemaking*, CC Docket No. 90-571, *Order on Reconsideration, Second Report and Order and Further Notice of Proposed Rulemaking*, FCC 93-104, 8 FCC Rcd 1802 (1993) (discussing confidentiality rules).

user.<sup>220</sup>

64. This process can be achieved with two telephone lines, or through one telephone line if the TRS user uses a TTY that works with a regular telephone handset.<sup>221</sup> The CA listens to the messages through a telephone handset and relays them back to the user as text.<sup>222</sup> Retrieving voice mailbox messages works similarly; however, because voice mailboxes<sup>223</sup> generally use an access code or personal identification number (PIN), the TRS user instructs the CA how to access his or her voice mailbox before the CA does so. In addition, these instructions should address how the menu selection process works because the menu choices listed by voice mailboxes generally require a response within a short period of time (or otherwise the system "times-out"), and thus the CA often must relay messages quickly.

65. Discussion. Based on our responsibility to ensure that TRS users receive functionally equivalent telecommunications services, we conclude that answering machine and voice mail retrieval are TRS features that must be provided to TRS users. The record reflects that TRS providers currently provide these features, it is technologically feasible, and these features are desired by TRS consumers.<sup>224</sup>

**b. Automatic call forwarding**

66. Background. In the *Improved TRS FNPRM*, we sought comment on the technological feasibility of providing automatic call forwarding to TRS consumers.<sup>225</sup> The automatic call forwarding feature permits calls placed by a TTY or other TRS user to another party's telephone number through a CA to be automatically forwarded to that other party's forwarded telephone number as previously designated by that other user.<sup>226</sup> After the call is forwarded to the voice user's designated alternate number, the CA is on the telephone line to begin relaying the call when the voice user answers the call. This feature benefits a TTY user in the same way it benefits any telephone user: it ensures that TTY calls will be connected to the

<sup>220</sup> Specific CA training may be necessary to effectively implement this feature. See, e.g., California PUC Comments at 6.

<sup>221</sup> These calls may typically begin when the TTY user calls the TRS facility and types, e.g., "I WANT TO USE ANS MCH RETRIEVAL GA." The TTY user would not need to give the CA a number to dial because the answering machine is at her same location. The CA instructs her to "PLS PLACE UR HANDSET NEXT TO ANS MACH AND TURN ON GA." The CA then hears the answering machine play the voice messages through the CA's telephone handset.

<sup>222</sup> The CA will be able to both listen to voice messages and send text messages simultaneously if a TTY with an acoustic couple that works with telephone headset and the answering machine do not share the same telephone line. If they do, then the CA will need to listen to the complete messages before relaying the messages in text.

<sup>223</sup> A voice mail system includes a PBX mailbox system.

<sup>224</sup> See e.g., California PUC comments at 6; NAD/TAN/CAN comments at 29-30; SHHH comments at 15.

<sup>225</sup> *Improved TRS FNPRM* at ¶ 138.

<sup>226</sup> The Commission agrees with GTE's assessment that this feature presents a terminating line issue. See GTE Comments at 13. We note that WorldCom defines this feature to mean that when a voice caller dials a TTY number, the call automatically connects to the TRS facility, making it a relay call from voice-to-TTY. WorldCom Comments at 21.

desired voice user even when the voice user is at a different number than that given to the CA by the TTY user.<sup>227</sup>

67. Discussion. Although we raised this issue in the *Improved TRS FNPRM*, we need not require this feature as a mandatory minimum standard because this feature is one that the called party subscribes to through his or her local telephone company.<sup>228</sup> When the called party has subscribed to call forwarding, any calls to that number – whether from a CA relaying a TRS call or from a person making a conventional voice call – will be automatically forwarded to the alternate number designated by the called party.

**c. Call Release**

68. Background. In the *Improved TRS FNPRM*, we sought comment on the technological feasibility of providing a TRS call release feature to TRS consumers.<sup>229</sup> Call release allows a CA to set up a TTY-to-TTY call that once set up does not require the CA to relay the conversation. The call release feature allows the CA to sign-off or be “released” from the telephone line, without triggering a disconnection between two TTY users,<sup>230</sup> after the CA connects the originating TTY caller to the called party’s TTY through, e.g., a business switchboard.<sup>231</sup> For example, if a person, who is deaf, wants to call another person, who is also deaf, at a hotel the calling party generally must go through the hotel’s switchboard to reach the guest room. The calling party calls the hotel on a TTY through TRS, is transferred to the hotel room by the hotel switchboard, and then conducts a TTY-to-TTY call directly with the other person without the use of a CA. Currently, in these circumstances, Commission rules allow for a CA to remain on the line, billing minutes for providing TRS. TRS call release would allow for the CA to sign off, or be “released,” once the two TTY parties are connected. At this point, the call ceases to be a TRS call subject to the per-minute reimbursement.

69. Discussion. We believe that TRS call release is necessary to provide functionally equivalent telecommunications services for TRS users. When a non-TRS user calls another party through a business switchboard, the caller is able to conduct a conversation with their called party without an intermediary remaining on the line. Similarly, with TRS call release, a TTY user can conduct a conversation with another TTY user without the assistance of an intermediary, once the CA has connected the calling party to the called party. Requiring TRS call release allows a TTY user to conduct his or her conversation privately after the CA facilitates the routing of the call from a TTY user to another TTY user through a central switchboard and then disconnects the TRS facility from the call. Several state TRS programs and TRS providers currently offer TRS call release.<sup>232</sup> Based on the record in this proceeding,

<sup>227</sup> Although we conclude that automatic call forwarding does not raise issues unique to TRS, we remind TRS providers of their obligation to handle all types of calls, including those forwarding to an alternate number designated by the called party.

<sup>228</sup> See GTE Comments at 13.

<sup>229</sup> *Improved TRS FNPRM* at ¶ 138.

<sup>230</sup> Only the actual minutes that a CA spends on the line with the TRS user prior to the transfer to the intended TTY party is reimbursable. See 47 C.F.R. § 64.604(c)(5)(iii)(E).

<sup>231</sup> See, e.g., TDI Comments at 6.

<sup>232</sup> See, e.g., California PUC Comments at 6; Massachusetts ATP Comments at 3.

we find that TRS call release is technologically feasible. Accordingly, we conclude that call release functionality will benefit TRS users and is required under our functional equivalency mandate. We require that TRS call release be provided on an intrastate and interstate basis.

**d. Speed dialing**

70. Background. In the *Improved TRS FNPRM*, we sought comment on the feasibility of providing TRS users with speed dialing capability.<sup>233</sup> For the general public, speed dialing can be provided by a LEC or a consumer's CPE. Currently, many TRS facilities offer this service by manually storing a list of telephone numbers with designated speed dialing codes in the TRS user's consumer profile.<sup>234</sup> In the context of TRS, speed dialing allows a TRS user to give the CA a "short-hand" name or number (*i.e.*, "call Mom") for the user's most frequently called telephone numbers. This feature permits a person making a TRS call through a CA to place the call without having to remember or locate the number he or she desires to call.

71. Discussion. TRS providers indicate that it is technologically feasible and that they are able to provide functional speed dialing for TRS users.<sup>235</sup> TRS users state that speed dialing functionality is desirable in TRS.<sup>236</sup> No parties filed comments opposing the requirement of speed dialing functionality in TRS. We note that many LECs offer a speed dialing feature to the general public as an adjunct-to-basic telephone transmission service. We therefore adopt rules to require that TRS facilities provide speed dialing functionality on an intrastate and interstate basis. We decline to adopt specific requirements for speed dialing functionality at this time. We anticipate that TRS providers will develop customized speed dialing and expect that consumers' needs will be addressed as this feature matures.

**e. Three-way calling**

72. Background. In the *Improved TRS FNPRM*, we sought comment on whether it was technologically feasible to provide three-way calling to TRS users.<sup>237</sup> The three-way calling feature allows more than two parties to be on the telephone line at the same time with the CA.<sup>238</sup> This is a desirable calling feature because it offers parties to a telephone call a way to add a third party to the call, which may often be convenient. It has long been available to voice telephone users.

73. Discussion. TRS consumers support requiring TRS facilities to offer the three-way calling feature.<sup>239</sup> The record reflects that several TRS providers currently offer this

<sup>233</sup> *Improved TRS FNPRM* at ¶ 138.

<sup>234</sup> See, e.g., WorldCom Comments at 25. Currently, four major TRS providers, AT&T, Hamilton, WorldCom and Sprint offer this service. TRS providers collect the telephone numbers from the form completed by the TRS users by a telephone call, mail, or website. See, e.g., [www.hamilton.net/relay/VCO.html](http://www.hamilton.net/relay/VCO.html); [www.sprintbiz.com/government/sprint.relay/features](http://www.sprintbiz.com/government/sprint.relay/features).

<sup>235</sup> See, e.g., WorldCom Comments at 25.

<sup>236</sup> See, e.g., NAD/TAN/CAN Comments at 30; TDI Comments at 13.

<sup>237</sup> *Improved TRS FNPRM* at ¶ 138.

<sup>238</sup> Three-way calling may include up to three conversation participants plus the CA.

<sup>239</sup> See, e.g., NAD/TAN/CAN Comments at 30; SHHH Comments at 12; TDI Comments at 12.



feature.<sup>240</sup> This feature is generally arranged in one of two ways.<sup>241</sup> First, the TRS consumer may request that the CA set up the call with two other parties. Once the CA does this, the CA voices TTY messages to the hearing users and relays voice messages as text to the TTY user. A second way to set up a three-way call is for the TRS user to connect to two telephone lines at the same time from his or her premises by using the telephone's switch-hook (or "flash") button. After making or receiving the first connection, the TRS user presses the flash button to put the first person on hold and get a new dial signal. The TRS user then dials the third party's number. When that call is answered, the TRS user again depresses and releases the flash button to link the three calls. At this point, the CA again relays voice messages to the TRS user, and voices text messages to the hearing parties. Since the record reflects that this feature is technologically feasible, and because it offers important benefits to all users, we will require three-way calling as a mandatory minimum standard for TRS. Once again, this conclusion necessarily follows from the functional equivalency mandate that governs our regulation of TRS.<sup>242</sup>

74. Requiring TRS providers to offer three-way calling as a standard feature of TRS, however, raises the question of how the costs of three-way TRS calls are to be recovered from the States or the Interstate TRS Fund. This issue arose in the Commission's enforcement action in *Publix Network Corp.*<sup>243</sup> In that case, an entity purporting to provide TRS, *inter alia*, handled conference calls and submitted cost recovery requests to the Interstate TRS Fund that were calculated on the basis of each two-way leg of each conference call, rather than on the basis of the time CAs spent facilitating the calls.<sup>244</sup> In the *Publix Show-Cause Order*, the Commission stated that the proper method for accounting for conference calls, or any other calls, "reflects the minutes of actual relay service, irrespective of how many callers are on the call."<sup>245</sup> As three-way calling matures to providing multi-party conference calling, there may be instances where more than one CA is necessary. The justification for reimbursement for multiple-CAs will have

<sup>240</sup> See, e.g., GTE Comments at 15; WorldCom Comments at 25.

<sup>241</sup> There is another type of TRS calling with multiple parties that involves the use of CART (Communication Access Real-time Translation). CART is an instant translation of the spoken word into English using a stenotype machine, notebook computer, and real-time software. See National Court Reporter's Association, CART, <http://www.cart.ncraonline.org/index.html> (visited January 24, 2003). As a result, with the use of CART the conversation pace tends to be at a much higher rate (150 to 200 wpm) during the multiple-party call than with a CA using a standard keyboard. See Massachusetts ATP Comments at 3. At this time, the Commission is not able to determine whether TRS providers should be required to offer this specific type of CART conference call, since it was not raised in our *Improved TRS FNPRM*. We are requesting further comment on this feature in the *NPRM*, *infra*.

<sup>242</sup> The Commission will not mandate how CAs handle different formalities and procedures among the three or more parties; however, we suggest each CA instruct the conference call parties to identify themselves each time they speak and to talk one at a time.

<sup>243</sup> See *Publix Network Corp.; Customer Attendants, LLC; Revenue Controls Corp.; SignTel, Inc.; and Focus Group, LLC*, EB Docket No. 02-149, File No. EB-01-TC-052, *Order to Show Cause and Notice of Opportunity for Hearing (Publix Show-Cause Order)*, 17 FCC Rcd 11,487 (2002).

<sup>244</sup> See *Publix Show-Cause Order* at ¶ 31.

<sup>245</sup> *Id.* at ¶ 32 (citing Letter from Dorothy T. Attwood, Chief, Common Carrier Bureau, Federal Communications Commission to Raanan Liebermann, President, Publix Network Corp., June 25, 2001; Letter from Maripat Brennan, Director of Fund Administration, National Exchange Carriers Ass'n to Raanan Liebermann, CEO, Publix Network Corp., May 10, 2001).

to be made by the TRS provider on a case-by-case basis, and that, as in all other contexts, attempts to collect more compensation than is justified may subject the TRS provider to enforcement action.

75. The Commission's rules regarding cost recovery state that formulae for cost recovery "shall be based on total monthly interstate TRS minutes of use. TRS minutes of use for purposes of interstate cost recovery from the Interstate TRS Fund are defined as the minutes of use for completed interstate TRS calls placed through the TRS facility beginning after call set-up and concluding after the last message call unit."<sup>246</sup> The essence of the "beginning after call set-up" provision is that cost recovery shall be based on the time that CAs spend facilitating calls, rather than the time that circuits are completed, or a total time period that includes the time needed to set up a call. Because the time the CA spends actually facilitating communication between individuals who have hearing or speech disabilities and those who do not have such disabilities is the basis of cost recovery, we clarify that cost recovery for three-way calling shall also be based upon the time the CA spends facilitating communication, excluding set-up time, and regardless of the fact that the call has more than two participants.

#### f. Waivers for IP Relay and VRS

76. Consistent with the *IP Relay Reconsideration Order*,<sup>247</sup> and the *STS/VRS Waiver Order*,<sup>248</sup> we will waive the requirement that IP Relay and VRS providers provide call release, three-way calling, and speed dialing. This waiver shall apply to all other current and potential IP Relay and VRS providers beginning on the release date of this *Order*. As set forth in the *IP Relay Reconsideration Order*, for administrative convenience all waivers granted will expire on January 1, 2008. These waivers will be contingent on IP Relay and VRS providers filing an annual report with the Commission detailing the technological changes in these areas, the progress made, and the steps taken to resolve the technological problems that prevent IP Relay and VRS providers from providing these features and services. For administrative efficiency, the first annual report on all waivers will be due twelve months from the date of publication of the *IP Relay Reconsideration Order* in the *Federal Register*.<sup>249</sup>

#### D. Public Access to Information and Outreach

77. In the *Improved TRS FNPRM*, we sought comment on whether we should implement a nationwide outreach campaign.<sup>250</sup> Specifically, we sought comment on modeling an outreach campaign based on the Maryland experience.<sup>251</sup> We also sought comment on various funding mechanisms and whether the Interstate TRS Fund Advisory Council, with input from stakeholders, would be an appropriate entity to make recommendations on TRS outreach.<sup>252</sup>

<sup>246</sup> 47 C.F.R. § 64.604(c)(5)(iii)(E).

<sup>247</sup> See *IP Relay Order on Reconsideration*, CC Docket No. 98-67, FCC 03-46 at ¶ 1.

<sup>248</sup> See *STS/VRS Waiver Order*, FCC 01-371, 16 FCC Rcd 22,948 (2001) at ¶¶ 26-27.

<sup>249</sup> See *IP Relay Order on Reconsideration*, CC Docket No. 98-67, FCC 03-46, 68 FR 18825 (published April 16, 2003).

<sup>250</sup> *Improved TRS FNPRM* at ¶¶ 134-136.

<sup>251</sup> See *Improved TRS FNPRM* ¶ 134.

<sup>252</sup> See *Improved TRS FNPRM* ¶ 134.

We proposed that any outreach campaign address all forms of TRS and all types of TRS calls, and be modeled after successful state advertising and outreach programs.<sup>253</sup> We further requested comment on whether we should require a state TRS program to include, and budget for, outreach efforts as one criterion for certification.<sup>254</sup>

78. The record on this issue is one of conflicting views on central issues regarding outreach.<sup>255</sup> State TRS programs, TRS consumers, and organizations representative of TRS consumer interests assert that it is appropriate for the Interstate TRS Fund to fund outreach efforts.<sup>256</sup> Sprint, a TRS provider, also supports outreach funded from the Interstate TRS Fund.<sup>257</sup> In contrast, WorldCom, also a TRS provider, proposes that the Commission encourage states to require TRS providers to provide outreach programs as part of the relay service agreement,<sup>258</sup> and that the Commission fund such programs from its own operating budget.<sup>259</sup> SBC asserts that increased awareness is desirable as long as there are no increases in the fees paid or charged by carriers and consumers.<sup>260</sup>

79. Based on the conflicting comments,<sup>261</sup> we conclude that we do not have an adequate record on which to make a determination on the open questions concerning outreach. Because we need additional information on which to base our final determinations regarding outreach, we are asking for such additional and specific information in the *NPRM*. We will instruct the Consumer Advisory Committee (CAC) to review the issues concerning outreach as set forth in the *NPRM*, and make recommendations to the Commission regarding this matter.

---

<sup>253</sup> See FCC Public Forum on 711 Access to Telecommunications Relay Services CC Docket No. 92-105 September 8, 1999, Comment by Gil Becker (Education Segment), Comment by Brenda Battat (Education Segment). See also, e.g., Maryland Dept. of Budget and Mgt. Comments at 3; NAD/TAN/CAN Reply Comments at 12; TDI Reply Comments at 15.

<sup>254</sup> *Improved TRS FNPRM* ¶ 136.

<sup>255</sup> Cf. California PUC Comments at 4; Florida PSC Reply Comments at 4; NAD/TAN/CAN Comments at 24; TDI Comments at 7; Sprint Comments at 7, with SBC Comments at 9; WorldCom Comments at 17-18.

<sup>256</sup> See, e.g., California PUC Comments at 4; NAD/TAN/CAN Comments at 24; NECA and TRS Advisory Council *ex parte* meeting with Commission staff, Dec. 11, 2002; STS Consumers; TDI Comments at 7.

<sup>257</sup> See Sprint Comments at 6-9; see also California PUC Comments at 4; SBC Comments at 9. We note that some providers currently submit some limited advertising costs to NECA, the interstate TRS Fund administrator, as part of their TRS operating expenses on which the per minute TRS reimbursement rate is based.

<sup>258</sup> See WorldCom Comments at 18.

<sup>259</sup> See WorldCom Comments at 11, 17-18. WorldCom supports outreach, but asserts that the Commission cannot assess common carriers a specific fee to fund a national outreach campaign or to direct common carriers to expend some specified amount of money on such a campaign. See *id.* at 14-16.

<sup>260</sup> See, e.g., SBC Comments at 9; see also WorldCom Comments at 11.

<sup>261</sup> Cf. California PUC Comments at 4; Florida PSC Reply Comments at 4; NAD/TAN/CAN Comments at 24; TDI Comments at 7; Sprint Comments at 6-9, with SBC Comments at 9; WorldCom Comments at 15-18. See also, e.g., AT&T Comments at 7-9; NECA and TRS Advisory Council *ex parte* meeting with Commission staff, Dec. 11, 2002; SHHH Comments at 9-11; STS Consumers; TDI Comments at 6-7.

80. We take this opportunity to once again remind common carriers that our current regulations require common carriers to take various steps to inform and educate the public of the availability and use of TRS.<sup>262</sup> We are confident that adherence to these requirements will inform and educate the general public about TRS and will help ensure that persons with disabilities are successful in using TRS.

## V. ORDER ON RECONSIDERATION IN CC DOCKET NO. 98-67

### A. Introduction

81. Petitions for Reconsideration (*Petitions*) of the *Improved TRS Order* were filed by the Florida Public Service Commission (Florida PSC), the National Association of State Relay Administrators (NASRA), VISTA Information Technologies, Inc. (VISTA), the Public Utility Commission of Texas (Texas PUC), SBC Communications Inc. (SBC)<sup>263</sup> and WorldCom, Inc. (WorldCom) (collectively, *Petitioners*).<sup>264</sup> *Petitioners* seek reconsideration of certain aspects of the *Improved TRS Order*,<sup>265</sup> which expanded the forms of TRS and types of TRS calls available to consumers and adopted new rules to improve the quality of TRS. Comments in response to the *Petitions* were filed by: Sprint Corporation (Sprint), Ultratec, Inc. (Ultratec), Self Help for Hard of Hearing People, Inc. (SHHH), and the National Association of the Deaf-Telecommunications Advocacy Network and Consumer Action Network (NAD/TAN/CAN).<sup>266</sup> WorldCom and NAD/TAN/CAN filed replies to the comments of various parties.<sup>267</sup> We address

<sup>262</sup> 47 C.F.R. § 64.604(c)(3). The rule states: "Carriers, through publication in their directories, periodic billing inserts, placement of TRS instructions in telephone directories, through directory assistance services, and incorporation of TTY numbers in telephone directories, shall assure that callers in their service areas are aware of the availability and use of all forms of TRS. Efforts to educate the public about TRS should extend to all segments of the public, including individuals who are hard of hearing, speech disabled, and senior citizens as well as members of the general population. In addition, each common carrier providing telephone voice transmission services shall conduct, not later than October 1, 2001, ongoing education and outreach programs that publicize the availability of 711 access to TRS in a manner reasonably designed to reach the largest number of consumers possible."

<sup>263</sup> SBC withdrew its Petition for Reconsideration and/or Clarification August 10, 2001.

<sup>264</sup> See Florida Public Service Commission *Petition for Reconsideration and Clarification* of 00-56, filed April 12, 2000 and Request for Waiver for Extension of Time to Implement Improved TRS Order filed Oct. 24, 2000 (*Florida PSC Petition*); National Association for State Relay Administration (NASRA) *ex parte* Comments and Request for Reconsideration of Effective Date of Amended Rules filed May 5, 2000 (*NASRA Petition*); SBC *Petition for Reconsideration or Clarification* filed July 21, 2000, *withdrawn* August 10, 2001 (*SBC Petition*); Texas PUC *Petition for Reconsideration* filed March 24, 2000 (*Texas PUC Petition*); Vista Technologies *Petition for Reconsideration* filed June 13, 2000 (*Vista Petition*); WorldCom *Petition for Reconsideration* filed July 21, 2000 and withdrawal of one issue, per *ex parte* meeting and letter dated June 6, 2001 (*WorldCom Petition*).

<sup>265</sup> FCC 00-56, 15 FCC Rcd 5140 (2000).

<sup>266</sup> See NAD/TAN/CAN Comments filed July 25, 2000 (*NAD/TAN/CAN Recon Comments*); SHHH Comments filed July 21, 2000 (*SHHH Recon Comments*); Sprint Comments filed August 22, 2000 (*Sprint Recon Comments*); Ultratec Comments filed Aug. 11, 2000 (*Ultratec Recon Comments*).

<sup>267</sup> See NAD/TAN/CAN Reply Comments filed Aug. 14, 2000 (*NAD/TAN/CAN Recon Reply Comments*); WorldCom Reply Comments filed Sept. 7, 2000 (*WorldCom Recon Reply Comments*).